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ABSTRACT

Part of a 4-volume set constituting a model to assist all school districts in Region 17 (Texas) in infusing comprehensive career oriented education into their existing instructional programs by 1980, this teacher guide contains materials for the third part of a 3-phase program designed to move the participant through a series of informational steps to a proficiency in developing comprehensive outcome based career oriented education topics. The Phase 3 volume (curriculum development) contains four sections. Section L provides opportunity for documentation of the school district's efforts in career oriented education. Planning for further implementation during the school year through development of additional career oriented topics is also provided. Section M (29 pages) provides for the development of skills for writing performance objectives. Section N provides opportunity for participants to document their activities in career oriented education using topics which have been adapted for individual classrooms and following the curriculum infusion format (outline) as a guide. Section O provides for development of new career oriented curriculum. (TA)

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EDUCATION SERVICE CENTER

REGION XVII

TEACHER GUIDE

FOR

CAREER ORIENTED EDUCATION

IMPLEMENTATION

WORKSHOP

PHASE III

(CURRICULUM DEVELOPMENT)

CE 009 384

ED130069

TEACHER GUIDE

FOR

CAREER ORIENTED EDUCATION

IMPLEMENTATION WORKSHOP

PHASE III

(CURRICULUM DEVELOPMENT)

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L. WORKSHOP OVERVIEW AND PROGRESS REPORTS

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1. Purpose - To document the school district's efforts in career oriented education and to plan for the remainder of the year.

2. Notes on progress reports and/or sharing sessions.

M. SKILLS FOR WRITING

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1. Notes on Transparency Presentation on Performance Objectives.

NOTES

2. EDUCATION SERVICE CENTER'S

*OBJECTIVES WRITING PACKAGE

WHAT YOU ALWAYS WANTED
TO KNOW ABOUT
PERFORMANCE OBJECTIVES
BUT WERE AFRAID TO ASK

OBJECTIVE:

Audience.	Participants (teachers, administrators, specialists)
Behavior.	Will be able to write a Terminal Performance Objective (TPO).
Conditions.	Upon completion of this package,
Degree.	75% of the participants will write a TPO conforming to the A B C D format.

*adapted from Instructional Development Institute Package
National Special Media Institutes

P E R F O R M A N C E O B J E C T I V E S

OVERVIEW:

This instructional package is designed to instruct you in the writing of behavioral objectives.

OBJECTIVES:

There are objectives and there are objectives--some are commonly associated with goals; some are developed as principles leading to some desired result; and some are less exact and are more of a feeling or in the realm of the philosophical. Objectives can serve as stimulus or as guidelines.

In this package we are going to confine ourselves to:

PERFORMANCE OBJECTIVES

A performance objective should have the following general qualities:

1. The learner and the instructor have a common understanding as to what is to be done, and
2. The learner and the instructor have a common and firm criteria by which a learner's progress and level of competency may be assessed at a specific point in time.

We will work with one level of performance objective in this activity:

Terminal Performance Objective (TPO); this is the final performance the learner must exhibit.

EXAMPLES OF OBJECTIVES:

One of the most significant differences between objectives in general and performance objectives is similar to the difference between a shotgun and rifle. The shotgun discharge pattern expands to cover a larger and larger area as it moves further from the weapon. A performance objective should be tightly defined with a minimum possibility of the learner misunderstanding what is to be done.

GENERAL OBJECTIVE:

Make a pie.

PERFORMANCE OBJECTIVE:

> Each student in the nutrition unit of the junior high homemaking course will make a fruit pie from the materials furnished within one normal class period which will indicate mastery of crust construction, making the filling, and baking the product. It will be served at the faculty lunch room where it will be evaluated by those eating it using the Betty Crocker check list with a minimum average score of 32.

It is obvious that one is much longer than the other but there are some other important differences. What do you feel are the important differences between them? Think about it before proceeding with the next item.

DISCUSSION OF DIFFERENCES BETWEEN GENERAL OBJECTIVE AND PERFORMANCE OBJECTIVE

Difference: We at least know in the performance objective that it is food to be eaten. It is not a mud-pie, a pie chart, or a meat pie. It is a fruit pie.

Difference: We also learn in the performance objective who is expected to make this pie. The defining of the **audience** tells us that it is in the nutritional unit and also by identifying it as junior high sets a first standard for final evaluation.

Difference: When the performance objective says "with materials furnished and within one normal class period" the **conditions** for the performance are not only stated but further limited to the materials and time made available.

Difference: In the performance objective the student will be expected to perform in three areas:

1. Crust Construction;
2. Filling Preparation;
3. Baking Techniques;

this is the **behavior** of the performance.

Difference: When the pie is baked it will be evaluated at once by those eating it in the faculty lunch room and the means for conducting the evaluation are stated. This is the **degree** of mastery.

Difference: The level of achievement based on the evaluation is stated in the performance objective which is the measurement of **degree**.

Before you react negatively to the performance objective, think about the following:

GENERAL OBJECTIVE:

Take out an appendix.

PERFORMANCE OBJECTIVE:

Each surgical intern on the general service will remove from a patient an inflamed appendix using the demonstration surgical equipment furnished and operating personnel available and demonstrate mastery of surgical incision, organ isolation, surgical McKinly technique of removal, antisepsis, surgical closure and have the patient survive.

Under which objective would you prefer your doctor to have received his training?

FORMAT FOR WRITING OBJECTIVES

Writing an objective is not unlike writing a sentence as to parts of speech:

1.	Who is to do something	-	the subject of the sentence;
2.	What is to be done	-	the verb of the sentence;
3.	To what is it to be done	-	the object of the sentence; and
4.	How is it to be done	-	the modifier in the sentence.

Which leads us very cleverly to the -

A,B,C,D',s

of writing objectives. On the left below is a description of the format, on the right, criteria are listed which should be contained in each format statement.

A is for the Audience which is to perform the objective	Who is to be doing the learning? What is the entry level of the student expected to perform the objectives?

Please turn to page 196.

B is for the expected **Behavior** of the performer	What observable action will the learner do?
C is for the **Conditions** under which the audience will perform when assessed	What resources will be used? What time limitations or resource limitations will be placed on the student's performance when he is being evaluated to determine if he has achieved the objective?
D is for **Degree** of measurement used to determine an acceptable performance level	Has he mastered the objective satisfactorily? (20 out of 20, 19 out of 20; 4 out of 5, 70% for a minimum grade of C).

Please turn to page 197 and take the Quiz on the ABCD's of writing objectives.

QUIZ ON ABCD's OF PERFORMANCE OBJECTIVES

(1) Without turning back to page 196 or using any resource other than your own memory, will you please complete the following items. Use only one word for each item.

A is for _____

B is for _____

C is for _____

D is for _____

(2) Without turning back to page 196 or using any other resource than your own memory, will you please complete the following statements by filing in the blank space or spaces with the word or words required.

a. Limiting the materials to be used during a performance is called the _____ of the performance.

b. The level at which a student proves he has mastered the objective is called the _____ of the objectives.

c. The observable action of the learner in the performance is called the _____.

d. The person(s) who is doing the learning is the _____ of the objective.

e. When writing performance objectives the writer should remember the cue letters __, __, __, __.

Please turn to page 198 to check your responses.

ANSWERS TO QUIZ ON ABCD's OF PERFORMANCE OBJECTIVES

(1) A is for Audience

B is for Behavior

C is for Conditions

D is for Degree

(2) a. Conditions

b. Degree

c. Behavior

d. Audience

e. A,B,C,D

If you made any errors, please review page 196 again before doing the quiz which follows on page 199.

If you were correct in all your responses, turn to page 199 and take the quiz.

ABCD QUIZ

The following are segments of ABCD stated objectives. Below each segment are listed the four basic components which should be included in a well-stated objective. Identify, by circling, the A,B,C, or D component which best represents each of the objective segments.

EXAMPLE: an eighth grade math student working on a contract in long division

(A.) Audience C. Conditions
B. Behavior D. Degree

1. given the use of a slide rule and a table of logarithms

A. Audience C. Conditions
B. Behavior D. Degree

2. read a short story and write out a plot description

A. Audience C. Conditions
B. Behavior D. Degree

3. answer correctly 10 of the 15 questions asked

A. Audience C. Conditions
B. Behavior D. Degree

4. a seventh grade social studies student who reads at fourth grade level but has a high mechanical aptitude

A. Audience C. Conditions
B. Behavior D. Degree

5. develop plans for and construct a model of a Navaho hogan (dwelling)

A. Audience C. Conditions
B. Behavior D. Degree

6. given an outline map of the United States with the major rivers drawn in but not labeled.

A. Audience C. Conditions
B. Behavior D. Degree

Go on to page 200 for answers to Quiz.

ABCD QUIZ ANSWERS

1. Conditions - Details equipment and resource to be used.

2. Behavior - Read-write describes performance.

3. Degree - 10 out of 15 describes satisfactory performance.

4. Audience - 7th grade social studies, fourth grade reader, and high mechanical aptitude describes student.

5. Behavior - Develop-construct describes performance.

6. Conditions - Outline map with unlabeled major rivers describes conditions of performance.

Please turn now to page 201.

REINFORCEMENT TIME: WHAT HAVE WE LEARNED?

1. In a performance objective the learner and the instructor have a common understanding as to what is to be done and the criteria for assessment of the student's performance are stated.

2. A performance objective will contain four basic components:

   A - The Audience, who exactly is expected to perform;

   B - The student's expected observable Behavior when performing;

   C - The Conditions under which the student will perform at the time assessment is made.

   D - The Degree or point at which a student proves he has mastered the objective.

HELPFUL HINTS FOR YOUR ABCD'S

A: There is a great deal of difference between the following audiences:

The students will construct a bridge from the six wooden blocks furnished; and

The cerebral palsy students in the small muscle hand unit of the clinic will construct a bridge from the six wooden blocks furnished.

The more exactly you can define your Audience the more exact is your performance objective and the more remote is the chance for confusion over for whom the objective was designed. If you ever order programs and systems from a catalogue you will appreciate this exactness. If you are even a student trying to match instructional resources to your educational needs you will appreciate the exactness.

B: A description of the student's expected behavior during the performance of the objective is the core of the objective. Take the following example:

1. The student will understand the principal parts in a research paper.

2. Each student in the English 116 Composition class will be able to write a research paper containing the five principal parts as defined by their textbook.

(continue on page 202)

In 2 the student will know specifically what the performance is. In 1, it might take a divine revelation for the instructor and student to have a common knowledge of what is to be done. A glossary of acceptable action words can also be found on page 218.

C: The stating of the conditions is really fair play. Not only is the student informed as to the exact conditions of the performance when he is evaluated, but instructor and student are also protected from any capriciousness on the part of either or both.

D: Perhaps the most difficult part of writing the performance objective is the degree or means of measuring the performance. Degree can be used as part of a grading curve, 70% to 80% correct exceed a C, etc; or it can be used as an absolute, mastery of...; or it may be some sort of evaluation by which the student determines his performance such as comparing his scores against the mean score on a test. It would be at the very least an agreement which instructor and student can recognize and not subject to differing interpretations.

Now that we know our A,B,C,D's of writing

PERFORMANCE OBJECTIVES

let's continue on to page 203.

LEARNING DOMAINS FOR OBJECTIVES

Most objectives written by teachers fall into three major learning domains or classifications called Cognitive, Affective, and Psychomotor.

1. COGNITIVE LEARNING DOMAIN OBJECTIVES* emphasize remembering or reproducing something which has presumably been learned, as well as solving some intellective task for which the individual has to determine the essential problem and then reorder given material or combine it with ideas, methods, or procedures previously learned. Cognitive objectives vary from simple recall of material learned to highly original and creative ways of combining and synthesizing new ideas and materials. Simply stated, cognitive objectives deal with what a student should know, understand or comprehend (e.g.,solve a math problem, spell a word, critique a poem).

2. AFFECTIVE LEARNING DOMAIN OBJECTIVES* emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience. In other words, affective objectives deal with how a student should feel about something (e.g., listen attentively, enjoy music, appreciate literature).

3. PSYCHOMOTOR LEARNING DOMAIN OBJECTIVES* emphasize some muscular or motor skill, some manipulation of material and objects, or some act which requires a neuromuscular coordination. Stated in another way psychomotor objectives are concerned with how a student controls or moves his body (e.g.,type 25 words per minute, print letters correctly, paint a picture, dribble a basketball).

In essence, Cognitive objectives emphasize THINKING, Affective objectives emphasize FEELING and psychomotor objectives emphasize ACTING.

SPECIAL NOTE: All objectives overlap into each learning domain. The thing to look for is the primary emphasis of the objective. Ask yourself what type of student behavior is really emphasized in the objective. Is it one of thinking, feeling or acting?

Turn to next page for examples of Cognitive, Affective and Psychomotor objectives.

*The above definitions are taken from David R. Krathwohl, Benjamin S. Bloom and Bertram B. Masia, Taxonomy of Educational Objectives, Handbook II: Affective Domain, New York: David McKay Company, Inc. 1964.

SAMPLE COGNITIVE OBJECTIVE

A. The junior high school student, in section II,
B. Will label clouds as being cirrus, stratus, cumulus, or nimbus,
C. When shown actual clouds or pictures of them.
D. He (she) should be able to label 80 percent of the examples correctly.

Since being able to identify different kinds of clouds requires the student to understand or comprehend the categories indicated, this is a cognitive objective.

SAMPLE PSYCHOMOTOR OBJECTIVE

A. Third grade students, beginning a unit on handwriting,
B. Will write,
C. The letters d, b, g, and p using cursive style handwriting.
D. Each letter will be well-formed and created with a single smooth stroke.

Since being able to write cursive style requires the student to manipulate an object, a pencil or pen, to produce a product, the written letters, this is a psychomotor objective.

SAMPLE AFFECTIVE OBJECTIVE

A. High school students, in the remedial biology class,
B. Will demonstrate an increased interest in biology by coming to class early.
C. The teacher will have the room open so they may come in early, but will not provide any special awards for students so doing.
D. The objective will be considered accomplished if an average of one-third of the students come early throughout the year and 80 percent come early at least once.

The objective suggests that a student will come to feel more positive about biology. Because increased interest and not knowledge of the subject is the behavior involved, this is an affective objective.

Turn to the next page and take the Quiz on Learning Domains.

QUIZ ON LEARNING DOMAINS

DIRECTIONS: Identify the objectives below as primarily emphasizing Cognitive (C), Affective (A) or Psychomotor (P) learning. Place a C, A, or P in the space at the left of each objective.

EXAMPLE:

A High school students (audience) will show increased sportsmanship by refraining from boos and hisses (behavior) at athletic contests (conditions). A significant decrease in the number of boos will indicate accomplishment of the objective (degree).

____1. Sixth grade students beginning a unit on pollution (audience), will come to value an unpolluted environment. Their concern for pollution will be measured by the way they discard papers, wrappers, etc. (behavior). On an outing where they are given individually wrapped candy and do not know that their paper discard behavior is being observed (conditions), the number of wrappers thrown on the ground will be significantly less than during a previous outing (degree).

_____2. High school Beginning Physics students (audience) will use Ohm's law to determine either the voltage, current or resistance in a DC circuit when given two of the values (conditions). Both the answer and the sequence used in solving the problem must be correct (degree).

_____3. Art I Calligraphy students (audience) will use a one-quarter inch lettering brush (conditions) to produce the gothic letters C D O and S (behavior). The letters will be of uniform width and well proportioned. Students will print ten of these letters in less than one minute (degree).

_____4. Fifth grade elementary school students (audience) will develop respect for the American Flag. They will demonstrate their respect by holding their hands over their hearts whenever the flag passes or is presented (behavior). Various students will be observed when the flag is presented during assemblies. The students must have no knowledge of the check on their behavior (conditions). The objective will be considered accomplished if an average of 90% of the class remembers to show proper respect (degree).

_____5. Junior high school algebra students in the honors section (audience) will calculate (behavior) the area of a variety of simple polygons when given relevant dimensions (conditions). Both their formulation of the problem and their answer must be correct (degree).

Turn to the next page for answers to the Quiz.

ANSWERS TO QUIZ ON LEARNING DOMAINS

1. A
2. C
3. P
4. A
5. C

If you missed two or less, go on to the next section. If you missed more than two, review the material on page 203 before going on to the next section, page 207.

A FOR AUDIENCE QUIZ

DIRECTIONS: The audience in each of the following objectives is not well defined.

1. Underline the audience portion of each objective.

2. Rewrite the audience statement so that the who of the objective is described in greater detail.

EXAMPLE: Given a cross-section drawing of the heart, the pupil will, within 10 minutes, from memory, and without the use of any other aids, label the superiorvena cava, the aorta, the left and right auricles, the left and right ventricles, the pulmonary and coronary arteries, and the tricuspid, bicuspid, pulmonary semilunar and aortic semilunar valves. 100% correct.

Audience: The sophomore students enrolled in Biology II

---

1. By the end of the 2nd grading period, they should be able to type 20 words per minute for a period of five minutes with less than three errors.

Audience: _____

2. Within one month, the ninth grade English student will complete research on two American short story writers and write, in typewritten form a comparison and contrast paper on the style of the two authors. The paper will include at least 4 comparison and contrast points.

Audience: _____

3. Given an outline map of the continents of the world, the student will label each continent correctly. He will be given 10 minutes to label the continents. No errors and each continent's name must be spelled correctly.

Audience: _____

Answers on page 208.

AUDIENCE QUIZ ANSWERS

	Underlined Audience Portion	Better Audience Statement*
1.	They--	Seventh grade students in beginning typing class.
2.	Ninth Grade English Student--	Ninth grade English student in the short story unit.
3.	The Students--	Sophomore student in Geography 10.

*Compare your written statement with the example given for each. Determine if your statement is adequate and what change you might make. When you have finished, go to Behavior Quiz I, page 209.

BEHAVIOR QUIZ I

DIRECTIONS: In each of the following partial statements of objectives

a. underline the verb

b. mark the verb acceptable or unacceptable in BEHAVIORAL TERMS

Example	_____	X	A) The student will understand four different math instructional techniques...
Example	_____	_____	B) Identify by underlining five types of granite from a list...
	_____	_____	1. Identify by pointing to ten major oceans, bays, and straits on an outline map...
	_____	_____	2. Know the rules of basketball...
	_____	_____	3. Send a four word message by Morse Code with a blink light...
	_____	_____	4. Recognize the rank of the ten largest cities in Canada...
	_____	_____	5. Read a Spanish paragraph and translate orally into English...
	_____	_____	6. Illustrate by drawing in charcoal a selected passage from Mark Twain's Huckleberry Finn.
	_____	_____	7. Enjoy watching Shakespeare's play, Hamlet..
	_____	_____	8. Underline the verbs in ten sentences...
	_____	_____	9. Learn the fundamentals of diagramming an electrical circuit...
	_____	_____	10. Appreciate the value of knowing five essential points on a map...
	_____	_____	11. Name and label the ten provinces of Canada on a blank map showing...
	_____	_____	12. Explore the identification of various types of vegetation...

Answers on page 210.

BEHAVIOR QUIZ ANSWERS

Acceptable	Unacceptable	Verb	
X		1.	identify (by pointing to)
	X	2.	know
X		3.	send
	X	4.	recognize
X		5.	read and translate
X		6.	illustrate (by drawing)
	X	7.	enjoy (watching)
X		8.	underline
	X	9.	learn
	X	10.	appreciate
X		11.	name and label
	X	12.	explore

If you had 10 or more correct, go on to the Conditions I Quiz on page 214. If you have less than 10 correct, turn to the Glossary for Behavioral Performance Objectives, page 218, and Interpretation of Verbs, page 219. After reviewing these do Behavior Quiz II on page 211.

BEHAVIOR QUIZ II

DIRECTIONS: Underline the verb in each of the following objective statements. Note in the left hand column whether the verb is acceptable (A) or unacceptable (U).

Acceptable	Unacceptable		
_____	_____	1.	A sixth grade social studies student who likes to draw and paint will draw an outline map of the continents of the world. He will label each continent correctly (100% correct) and will paint each continent a different color. This student will complete the project in two weeks.
_____	_____	2.	A ninth grade home economics student with 2 years of 4H experience in sewing will illustrate 5 basic hem stitches and 5 decorative stitches (by preparing separate cloth swatches). Each swatch will illustrate one type of stitch. The stitches will match textbook illustrations. The student will have 1 week in which to prepare the stitch samples.
_____	_____	3.	The fifth grade boys PE class, who have just completed a unit on baseball and have played in the junior high league, will enjoy listening to all games being played in the World Series.
_____	_____	4.	On an outline map which has been provided, but without any outside aids such as books or other maps, the ninth grade geography student will correctly identify and label fifteen major rivers of the United States and Canada.
_____	_____	5.	Given ten single digit multiplication problems, the fourth grade math student will compute eight of the problems correctly.
_____	_____	6.	After completing a unit on the geometric shapes present in our world, the eight grade math student will appreciate the beauty of these shapes.
_____	_____	7.	The third grade language arts student, who walks at least 4 blocks to school 2 out of 5 mornings per week, will explain in writing (at least 3 sentences) the most frequent route he uses. Another classmate must be able to follow his written directions.

Continue the Behavior Quiz II on page 212.

_____ _____ 8. The fifth grade social studies student having just completed the unit on the United States--"The States and Their Capitals"--will know the names of 45 of the 50 states and also know 45 of the 50 state capitals. The 45 state capitals do not have to be from the known 45 states.

Answers on page 213.

BEHAVIOR QUIZ ANSWER KEY II

		Verb
acceptable	1.	draw label and paint
acceptable	2.	illustrate
unacceptable	3.	enjoy
acceptable	4.	identify and label
acceptable	5.	compute
unacceptable	6.	appreciate
acceptable	7.	explain (in writing)
unacceptable	8.	know

DEGREE CHECK

If you had 6 or more correct, go on to Recognizing Conditions Quiz, page 214. If you had less than 6 items correct, review pages 218 and 219 before going to next quiz

A: RECOGNIZING CONDITIONS QUIZ I

DIRECTIONS: From each of the following groups of statements, select by circling one or more statements which describe the condition(s) which exist during the time that a student is being evaluated.

EXAMPLE:
a. must be able to identify cones, cylinders, and prisms
(b) given a set of geometric shapes
(c) within a 30 minute period
d. students in a 10th grade Geometry class

1.
a. without the aid of references
b. 33 correct out of a possible 50
c. 9th grade geography students
d. select the proper location of major rivers

2.
a. compute the area of a circle
b. without the aid of a slide rule
c. without any errors
d. 8th grade algebra students

3.
a. given an algebraic story problem of the following class
b. select the correct answer
c. be able to answer correctly
d. the 12th grade college prep calculus class

4.
a. in a period of less than 1 hour
b. without the aid of a reference map
c. find the location of a major Asian river
d. correctly in 50% of all cases

5.
a. by arranging parallel lines
b. the student will identify by labeling the 10 major European cities
c. from memory and within a 5 minute period
d. 8 out of 10 correct

6.
a. the student will solve an algebraic equation
b. given a linear equation with one unknown
c. within a period of 50 minutes
d. using an outline of the correct procedures for solving a linear equation

Answers on page 215.

RECOGNIZING CONDITIONS QUIZ ANSWERS I

1.	a	Limits use of resources
2.	b	Limits equipment
3.	a	Limits activity
4.	a-b	Limits time and resources
5.	c	Limits resources and time
6.	b-c-d	Limits activity, time and resources

If you had more than 4 correct, go on to Degree Statement Quiz I, page 216. If you had 4 or less correct, review definition of Condition statement found on page 196 and then go on to Degree Statement Quiz I on page 216.

DEGREE STATEMENTS QUIZ I

DIRECTIONS: Underline the degree part of the following objective statements. If the degree statement is poor or missing, make any additions necessary to improve it.

EXAMPLE: Given twenty notes written on the bass clef staff on the blackboard, the first year cello player must write the names of 90% of the notes in one minute.

1. Each second semester geometry student, given all the basic shapes (cone, cylinder, prism, and sphere) will identify orally each one of the four shapes.

2. At the end of the two week library session, the junior high student will locate, by use of the card catalog, five books named by the instructor. A maximum of 10 minutes will be allowed.

3. With a slide projector and slides the seventh grade audiovisual aide will show the slides in the proper sequence and all slides will be projected so that the images are right-side-up.

4. Given a map of the Oregon Trail drawn by a fourth grader, the high school geography student using his text and additional references, in one class period, will identify all the correct parts of the student's map.

5. Using tape recorded readings of the tryout sessions for the school play, students in the drama class will, to the satisfaction of the class, select the proper voice for each character.

Check your response with answers on page 217.

DEGREE STATEMENTS QUIZ I ANSWERS

1. Each one of the four shapes
2. Five books named by the instructor
3. In the proper sequence and all slides will be projected--right-side-up
4. All the correct parts of the student's map
5. To the satisfaction of the class

If you got all 5 of these correct you have completed this package. If you did not get them all correct reread paragraph D, page 196.

GLOSSARY FOR BEHAVIORAL PERFORMANCE OBJECTIVES

VERBS--the action words of an objective

Verbs and objects combine to make either clear statements or fuzzy statements about what the learner will be doing when he attains the objective. Clear statements are important. They are statements of intent which enable students (and other teachers, administrators or parents) to know what is important and what is expected. They eliminate the game of trying to outguess the teacher or the con game of bluffing it through.

Robert Mager uses the following two lists of words to contrast the two types of words which are most appropriate to describe behavior:

Words Open to Many Interpretations	Words Open to Fewer Interpretations
to know	to write
to understand	to recite
to really understand	to identify*
to appreciate	to differentiate
to fully appreciate	to solve
to grasp the significance of	to construct
to enjoy	to list
to believe	to compare
to have faith in	to contrast

*Acceptable only if used with other terms such as underlining, circling, etc.

The following verbs were selected from Norman Gronlund's "Illustrative Verbs for Stating Specific Learning Outcomes" list. The original list was prepared by Calvin K. Claus.

alter	formulate	arrange	reproduce
predict	substitute	chart	compose
rephrase	speak	circle	carve
combine	translate	itemize	paint
evaluate	verbalize	organize	pantomime
perform	calculate	square	dissect
integrate	measure	feed	button

INTERPRETATIONS OF VERBS

Read the following paragraph from HOW TO USE BEHAVIORAL OBJECTIVES in Science Instruction, by Koran, Montague and Hall.

When writing a behavioral objective, one must use a specialized verb limited to few interpretations. Such a verb, which precisely describes the desired behavior, gives the teacher a sort of reference point from which he can judge whether the learner has demonstrated the desired behavior. Some examples of these specialized verbs, called action verbs, which correspond with objectives designed to measure thinking are: write, describe, name, identify, predict, infer, select, state, demonstrate, construct, estimate, measure, compare, distinguish, and classify. Another group of verbs which appear to be more appropriate to measuring the degree of student interest, motivation, and values are: select, persist, visit, adopt, accept, and support. Such verbs as understand, know, enjoy, appreciate, and learn are not acceptable for writing behavioral objectives because their meaning is open to many interpretations.

The following are additional selected verbs from Gronlund's Illustrative Verbs for Stating Specific Learning Outcomes. The list was prepared by Calvin K. Claus.

1.	"CREATIVE" BEHAVIORS			
	Change	Modify	Paraphrase	Rearrange
	Restructure	Retell	Synthesize	Vary
2.	MUSIC BEHAVIORS			
	Blow	Clap	Harmonize	Play
	Pluck	Practice	Sing	Strum
3.	ARTS BEHAVIORS			
	Assemble	Color	Draw	Frame
	Mold	Paste	Sculpt	Varnish
4.	DRAMA BEHAVIORS			
	Act	Direct	Display	Emit
	Express	Move	Respond	Show
5.	COMPLEX, LOGICAL, JUDGMENTAL BEHAVIORS			
	Analyze	Contrast	Criticize	Decide
	Defend	Explain	Generate	Structure
6.	LANGUAGE BEHAVIORS			
	Abbreviate	Capitalize	Edit	Outline
	Pronounce	Read	Summarize	Write
7.	MATHEMATICAL BEHAVIORS			
	Add	Compute	Count	Derive
	Extrapolate	Graph	Reduce	Solve
8.	LABORATORY SCIENCE BEHAVIORS			
	Calibrate	Conduct	Convert	Demonstrate
	Grow	Manipulate	Prepare	Weigh
9.	PHYSICAL BEHAVIORS			
	Bend	Carry	Float	Hit
	Lift	Run	Ski	Throw

REFERENCES

1. CORD Manual, Second Edition, Teaching Research, Monmouth, Oregon, 1969, pages 1-22.

2. Gronlund, Norman E., Stating Behavioral Objectives for Classroom Instruction, MacMillan Company, 1970, pages 53-55.

3. Koran, Montague, and Hall, "How to Use Behavioral Objectives in Science Instruction", National Science Teachers Association, Washington, D.C. 1969, page 1-2.

4. Mager, Robert, Preparing Instructional Objectives, Fearon Publishers, Inc., 1962, page 11.

5. Objectives for Instructional Programs--An Instructional System for Use in Workshops, Small Groups or Individual Study Situations, INSGROUP, INC. Instructional Systems Group, 5855 Naples Plaza, Suite 204, Long Beach, California 90803.

6. Popham, Educational Objectives, VIMCET Associates, P.O. Box 24714, Los Angeles, California

WRITING A TERMINAL PERFORMANCE OBJECTIVE

DIRECTIONS:

Write a TPO using the complete ABCD format. Develop your objectives to meet an existing instructional need.

EXAMPLE: TPO: Students new to Alderson High, after three weeks will be able to identify each building on campus from an outline map with 95% accuracy.

A. students
B. identify
C. using outline building map
D. 95% accuracy

TPO:

A.
B.
C.
D.

Once you have written your objective, you may compare your work with an example developed by another participant. Rewrite objective until you are satisfied that it is correct.

STOP

Wait for further instructions

N. DOCUMENTATION (WRITING) OF CAREER ORIENTED CLASSROOM ACTIVITIES

1. Curriculum Infusion Format (Reference Only)..... Page 223

2. Curriculum Infusion Outline..... Page 224

1. Curriculum Infusion format - This is located on page 113 of the teacher guide and should be used as a reference during all curriculum writing. The curriculum infusion outline which follows should also be used in all curriculum writing.

2. CAREER ORIENTED EDUCATION CURRICULUM INFUSION OUTLINE
(same as in H)

TITLE:_____

GRADE LEVEL:_____

INTRODUCTION

I. Goals, Objectives and Learner Outcomes

A. Teacher Goals (General Statements)

B. Learner (Behavioral) Objectives

C. Learner Outcomes

II. General Information

A. Definition of Terms

B. Vocabulary

III. Occupational Information, Description and Listings

A. General description (include necessary background information)

B. Job entry and preparation

C. General requirements

D. Working conditions and benefits

E. Occupational listings

IV. Motivational Activities

V. Research and Study Activities

VI. Subject Content Tie-In Activities

A. Language Arts

B. Math

C. Science

D. Social Studies

E. Other Subject Areas

VII. Suggested Hands-On Activities

VIII. Suggested Resource Persons

IX. Suggested Field Trip Sites

X. Suggested Role Playing Activities

XI. Suggested Guidance Activities

XII. Follow-up Activities

XIV. Evaluation

A. Self Evaluation

B. Student Observations

C. Written Evaluation (Pre-Post Test)

XV. Resource Materials and Bibliography

A. Resource Materials (Filmstrips, 16 mm. Films, Multi-media Kits, Etc.)

B. Bibliography

O. DEVELOPMENT OF NEW CAREER ORIENTED CURRICULUM

1. Topic Generation Activity..... Page 234

2. Rank Value Chart..... Page 235

Scope and Sequence Chart..... Page 236

1. CAREER EDUCATION CURRICULUM INFUSION
TOPIC GENERATION ACTIVITY
(197__, 197__)

SUBJECT_____ _____TEACHER'S NAME

GRADE LEVEL_____ ROOM NUMBER_____ _____CAMPUS NAME

Topics (skills, chapter titles, concepts, unit of work) taught in my classroom during the school year include: (Use textbook or teacher's guide)

	Topic	Approx. Date month/period	Individual Rank For Infusion	Rank Value (Team) *
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

(#1 = 10 points)
(#2 = 9 points)
(#3 = 8 points)
(#4 = 7 points)
(#5 = 6 points)
(#6 = 5 points)
(#7 = 4 points)
(#8 = 3 points)
(#9 = 2 points)
(#10= 1 point)

I (or our team) will develop _____of these topics and implement
(number)
them in my/our classroom(s) prior to the end of the current school year.

50 _____
Teacher's signature

2. *RANK VALUE CHART
(IF APPROPRIATE)

TOPICS GENERATED	Rank value as Assigned by each team member (1-10) A	B	C	D	E	F	G	H	TOTAL RANK VALUE SUM (1-10)
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

Topics selected by team for immediate development and implementation:

1. _____
2. _____
3. _____
4. _____
5. _____

*Refer to Topic Generation Activity Sheet

3. SCOPE AND SEQUENCE
(BY TOPICS)

Circle appropriate grade levels:

K-2 3-4 5-6 7-8 9-10 11-12

TOPIC	LEARNER OUTCOME CATEGORIES								
	Career Planning	Career Info.	Job. Acq.	Att. and Apprec.	Skills in Hum. Rel.	Self-Inv. and Eval.	Per/Work Soc.Resp.	Economic Factors	Ed./Career Opp. Rel.

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